**Patent Claims**

1. Gas-filled bubble sheet for application in civil engineering, comprising at least two film webs which are connected to one another and contain at least one barrier material, and of which at least one consists of a plurality of preferably biaxially oriented layers, characterized in that a first, thermoformable film web has at least 5 layers as a bottom web,

the barrier material, preferably ethylene/vinyl alcohol copolymer (EVOH), polyvinylidene chloride (PVDC) or polyethylene terephthalate (PET),

being embedded between two layers of adhesion-improving and/or load-distributing material, such as, for example, polyamide (PA) and/or an adhesion promoter,

and the outer layers of the film web consisting of a weldable material, preferably polypropylene (PP) or polyethylene (PE).

2. Bubble sheet according to Claim 1, characterized in that at least one of the layers, preferably that comprising polyethylene terephthalate (PET) or polypropylene (PP), carries a metal coating.

3. Bubble sheet according to either of the preceding Claims, characterized in that the layer of barrier material has a thickness of at least 4 µm, preferably about 9 - 20 µm.

4. Bubble sheet according to any of the preceding Claims, characterized in that the adhesion-improving and/or load-

distributing layers have a thickness of, in each case, at least 2 µm, preferably about 10 µm.

5. Bubble sheet according to any of the preceding Claims, characterized in that the outer layers of weldable material, together with the respective adhesion promoter layer, have a thickness of, in each case, at least 10 µm, preferably about 15 - 30 µm.

6. Bubble sheet according to any of the preceding Claims, characterized in that a second film web as a top film web has layers in the following sequence:

- Polyethylene terephthalate (PET) or polypropylene (PP),
- metallization,
- polyurethane adhesive,
- an at least 2-layer, preferably 5 - 7-layer, coextruded film, in particular containing one layer each of high density polyethylene (HDPE) and either linear low density polyethylene (LLDPE) or very low density polyethylene (VDPE).

7. Bubble sheet according to any of the preceding Claims, characterized in that at least one film web contains a further barrier material.

8. Bubble sheet according to any of the preceding Claims, characterized in that the first film web has a total thickness of 28-120 µm, preferably about 40 - 80 µm, and, in the second film web, the metallized PET layer or PP layer has a thickness of 10-20 µm, preferably about 12 µm, and the 2 - 7 layers of coextruded film have a total thickness of 10-50 µm, preferably about 20 - 40 µm.

9. Bubble sheet according to any of Claims 6 to 8,

characterized in that the metallized PET layer or PP layer in the second film web has an optical density of 2.5 to 3.1.

10. Bubble sheet according to any of the preceding Claims, characterized in that the bubbles are filled with an inert gas, preferably argon, or with an inert gas mixture.

11. Use of a gas-filled bubble sheet comprising a plurality of film webs, of which at least one film web consists of a plurality of layers and at least one of these layers contains a barrier material, for footfall sound insulation and/or as a heat-insulating layer in civil engineering.